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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,793	10/26/2008	Christophe Jacques Philippe Janneteau	CML01136EP	1496
22917 MOTOROLA SOLUTIONS, INC. IP Law Docketing 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196	7590 03/02/2011			
			EXAMINER CAMPBELL, MATTHEW T	
			ART UNIT 2465	PAPER NUMBER
			NOTIFICATION DATE 03/02/2011	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USAdocketing@motorolasolutions.com

# Office Action Summary

**Application No.**

10/596,793

**Applicant(s)**

JANNETEAU ET AL.

**Examiner**

MATTHEW CAMPBELL

**Art Unit**

2465

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-945)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This office action is in response to the application filed on 10-26-2008. Claims 1, 2 and 4-21 are presented, of which claim 1 is the independent.

***Claim Objections***

2. In claim 2, "a the mobile network" should be changed to --the mobile network--

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 8-15 and 18-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 8, "each MSG-enabled interface" has no antecedent basis.

For claim 9, "the GMP subscription" has no antecedent basis.

For claim 10, "the GMP subscription" has no antecedent basis.

For claim 11, "the MSG-enabled interface" and "said MSG-enabled interface" have no antecedent basis.

For claim 12, "the GMP protocols" lacks antecedent basis because base claim 1 recites only one group membership protocol. Claims 13 and 14 inherit this deficiency.

For claim 15, "the MSG-enabled interface" lacks antecedent basis.

For claims 18, 19, 20 and 21, it is unclear the scope of "IPv4" MRP and "IPv6" MRP. For the purposes of examination they will be interpreted to mean any MRP.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 6, 7, 11, 12, 15-18 and 21 rejected under 35 U.S.C. 102(b) as being anticipated by Venaas S., "An IPv4 - IPv6 multicast gateway", Internet Engineering Task Force Internet Draft: draft-venaas-mboned-v4v6mcastgw-00.txt, February 2003 (available ietf.org).

For claim 1, Venaas teaches a method of communicating traffic in a network, wherein the network comprises a Network Node (NN), a Router (MR) for forwarding traffic between the network and the Internet, and a Multicast Signaling Gateway (MSG)

co-located with the Router (MR), the method comprising: communicating traffic, from a source to a group (G) of nodes that includes the Network Node (NN), using at least one multicast protocol (**§1, multicast gateway couples IPv6 and IPv4 hosts**); and translating, by the Multicast Signaling Gateway (MSG) on an outgoing router interface, signaling messages of a multicast routing protocol (MRP) into messages of a group membership protocol (GMP) (**§5.1 ¶1, receive PIM join when IPv6 node joins, and send IGMP join to corresponding IPv4 node**).

For claim 6, Venaas teaches A method as claimed in claim 1, wherein said Multicast Signaling Gateway (MSG) operating on said interface determines whether said signaling messages contain an identification of a target multicast Group (G) and translates the target multicast group identification into group membership protocol (GMP) (**§5.1, An IPv6 host joins the group FFxx:<blah>:a.b.c.d, gateway receives PIM join and joins a.b.c.d using IGMP**).

For claim 7, Venaas teaches A method as claimed in claim 6, wherein said Multicast Signaling Gateway (MSG) operating on said interface determines whether said signaling messages contain an address of a target multicast group source (S) and translates the target source address into group membership protocol (GMP) (**Appendix B ¶3, Possible enhancements include Source Specific Multicast (SSM) which allows IPv6 hosts to join specific IPv4 sources; §3, The gateway makes use of**

**PIM sparse mode [PIM-SM]; RFC 2362 [PIM-SM] at §3.2 and §4.5, PIM join message includes a join list containing a set of source addresses).**

For claim 11, Venaas teaches A method as claimed in claim 1, wherein multicast packets from a source external to said network to which said network is subscribed are multicast-routed within said network according to a local multicast forwarding table of said router (MR) **(§5.1 ¶2, When the gateway receives a multicast packet for a.b.c.d it prepends the /96 prefix to form the IPv6 address FFxx:<blah>:a.b.c.d. If the gateway has outgoing interfaces for this group, it will send an IPv6 packet to the same interfaces to which it would have forwarded an IPv6 packet for the group.)**.

For claim 12, Venaas teaches A method as claimed in claim 1, wherein said Multicast Signaling Gateway (MSG) uses a service interface as provided by the GMP protocol to generate the GMP messages, and thus to enable and disable reception of packets sent to specific IP multicast addresses by specific sources **(§5.1, The gateway joins a.b.c.d using IGMP, and stays joined as long as it has state for the group)**.

For claim 15, Venaas teaches A method as claimed in claim 1, wherein said Multicast Signaling Gateway (MSG) detects Multicast Routing Protocol (MRP) messages by monitoring packets **(§5.1 ¶1, receive PIM join when IPv6 node joins)**.

For claim 16, Venaas teaches A method as claimed in claim 1, wherein said Multicast Signaling Gateway (MSG) is embedded within an extension of a multicast routing protocol (MRP) implementation (**Appendix B ¶2, One could possibly let the gateway be an IPv4 PIM router**).

For claim 17, Venaas teaches A method as claimed in claim 1, wherein said Multicast Signaling Gateway (MSG) translates multicast packets together with unicast source addresses and multicast destination addresses of multicast packets between IPv4 and IPv6 protocols (**see §1 ¶2, gateway placed at the border between IPv6-only and IPv4-only networks to allow multicast access between them**).

For claim 18, Venaas teaches A method as claimed in claim 1, wherein said Multicast Signaling Gateway (MSG) translates MRP messages into IPv4 GMP messages (that is IGMP messages) (**§5.1 ¶1, receive PIM join when IPv6 node joins, and send IGMP join to corresponding IPv4 node**).

For claim 21, Venaas teaches A method as claimed in claim 1, wherein said Multicast Signaling Gateway (MSG) translates MRP messages into IPv4 GMP messages and enables IPv6 nodes to receive multicast packets from IPv4 multicast groups and sources (**§5.1 ¶1, receive PIM join when IPv6 node joins, and send IGMP join to corresponding IPv4 node**).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venaas in view of Korus et al. (US 20030095523 A1).

For claim 2, Venaas does not teach A method as claimed in claim 1, wherein the Network Node (NN) is a Mobile Network Node (MNN) operating in a mobile network and the router is a Mobile Router (MR) for forwarding traffic between a the mobile network and the Internet. However, Korus teaches wherein the Network Node (NN) is a Mobile Network Node (MNN) operating in a mobile network and the router is a Mobile Router (MR) for forwarding traffic between a the mobile network and the Internet (**see fig. 1, mobile networks 1 and 2 with mobile network nodes 102 and mobile routers 106 for forwarding traffic between the mobile networks and service networks 120, 130**



**and 140).** It would have been obvious to one having ordinary skill in the art to modify Venaas with Korus teaching by implementing the multicast gateway in a mobile router in order to provide mobility.

For claim 10, Venaas does not teach A method as claimed in claim 1, wherein said Multicast Signaling Gateway (MSG) renews the GMP subscription for groups and associated source lists maintained for said interface in response to a change of topological attachment point of said interface. However, Korus from the same field of endeavor teaches wherein said Multicast Signaling Gateway (MSG) renews the GMP subscription for groups and associated source lists maintained for said interface in response to a change of topological attachment point of said interface (**see fig. 3 element 302-312 and ¶30-32, monitor IP network connectivity and join multicast group on behalf of mobile network in response to IP subnet connectivity changed**). It would have been obvious to one having ordinary skill in the art to modify Venaas with Korus's teaching in order to prevent multicast disconnection related to network movement.

10. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venaas in view of Watanuki et al. (US 6853639 B1).

For claim 4, Venaas teaches A method as claimed in claim 1, wherein the Multicast Signaling Gateway (MSG) operating on said interface translates said signaling

messages into group membership protocol messages (GMP) (**see base claim 1**), but does not teach determining whether said signaling messages relate to the group join class ({JOIN}) or the group leave class ({LEAVE}). However, Watanuki teaches determining whether signaling messages relate to the group join class ({JOIN}) or the group leave class ({LEAVE}) (**fig. 20, table for conversion between routing protocol messages and GMRP Join and Leave classes**). It would have been obvious to one having ordinary skill in the art to modify Venaas with Watanuki's teaching in order to simplify translation.

For claim 5, Venaas in view of Watanuki teaches A method as claimed in claim 4, wherein said determination of the class is made using a class table which provide the class as a function of the type of said signaling message (**Watanuki: fig. 20**). Examiner maintains same analysis as that applied to the parent claim.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW CAMPBELL whose telephone number is 571-270-3988. The examiner can normally be reached on Monday through Friday from 9:00am until 6:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew T. Campbell/  
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2-22-2011

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